

09847665-050301

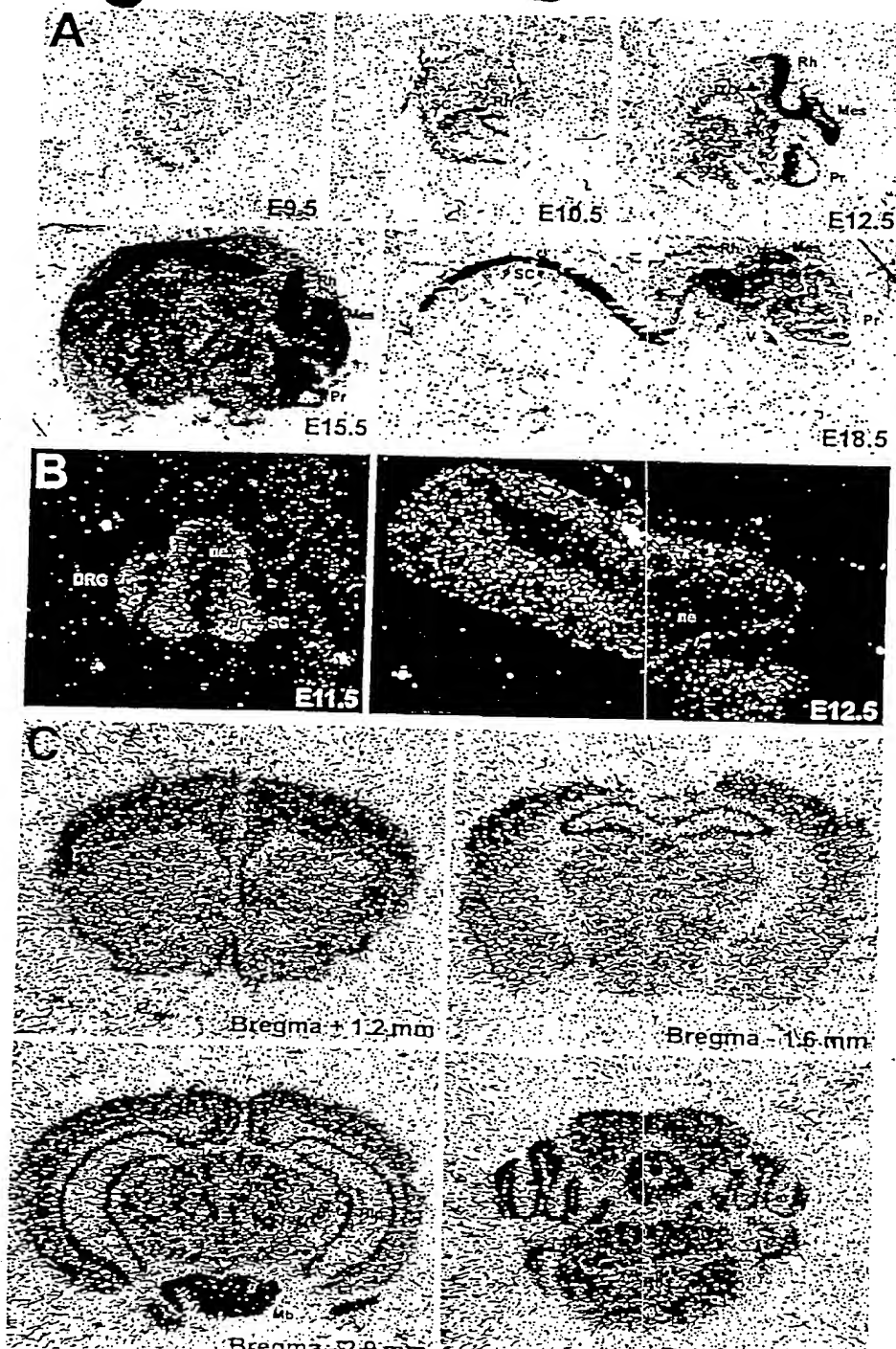
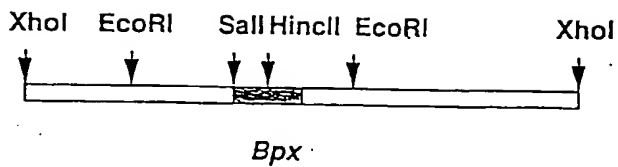


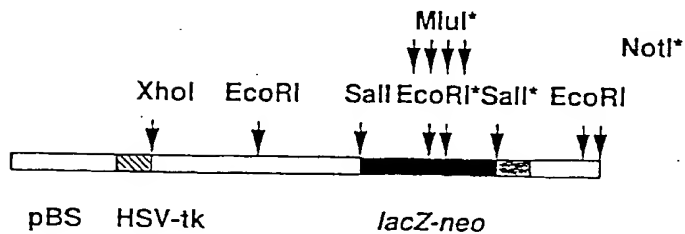
FIGURE 1

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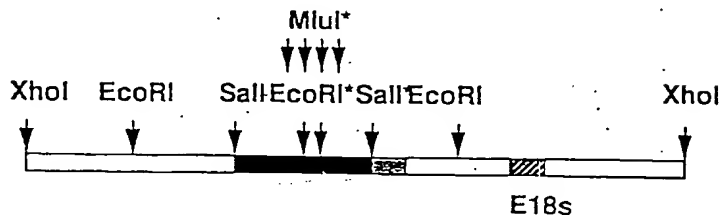
**a**



**b**



**c**



\* introduced sites

FIGURE 2

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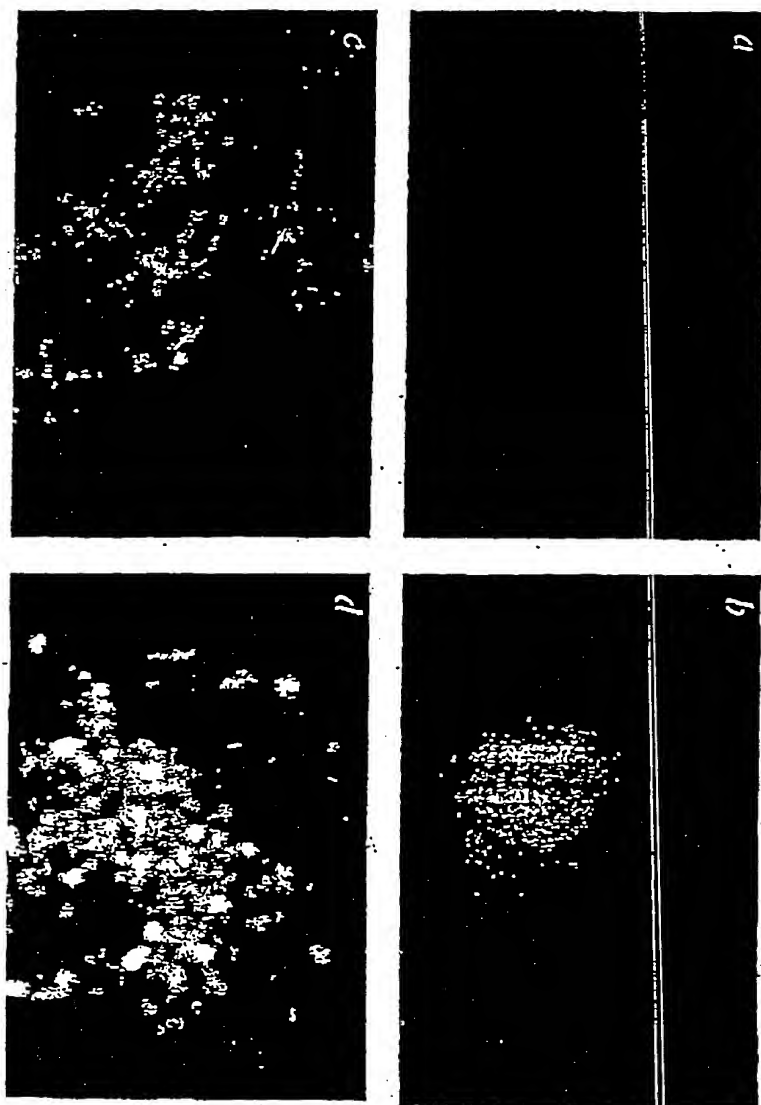


FIGURE 3

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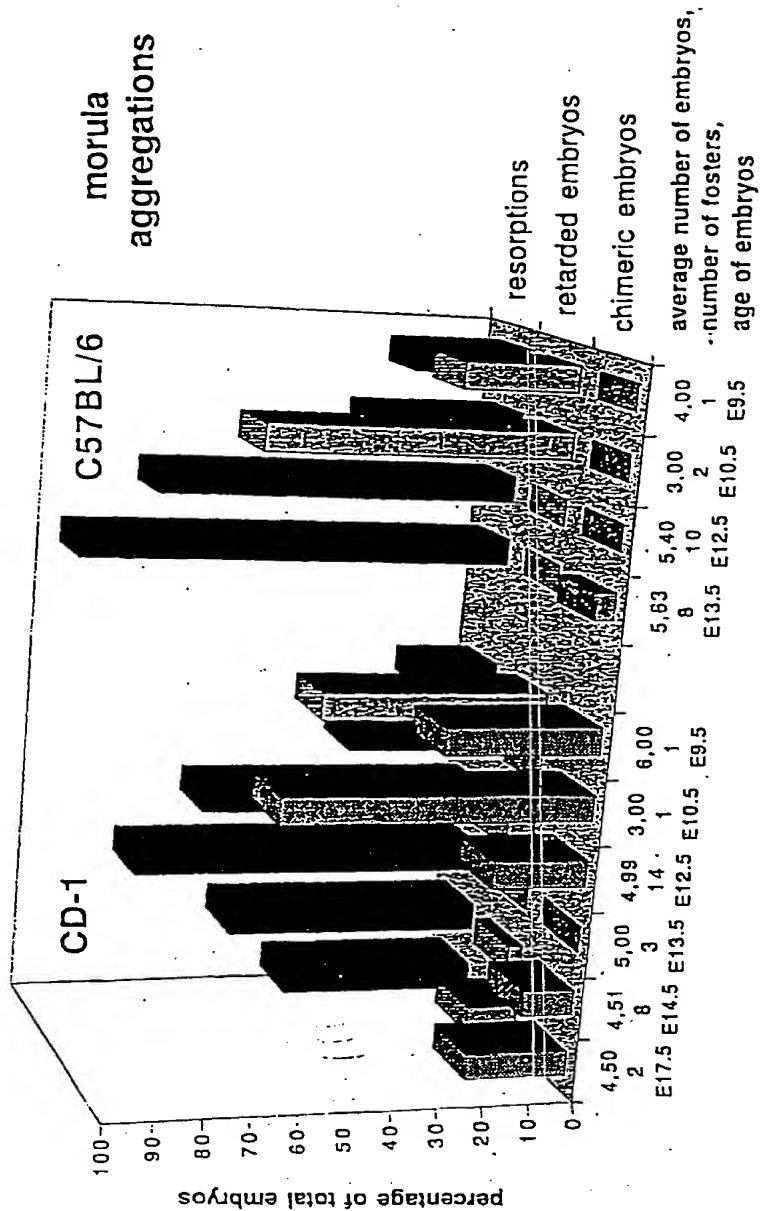


FIGURE 8

E17.5



E14.5

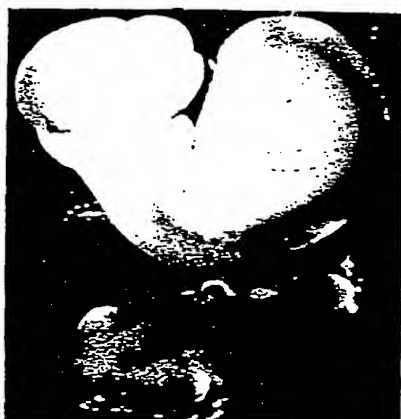


E12.5



FIGURE

E10.5



E9.5



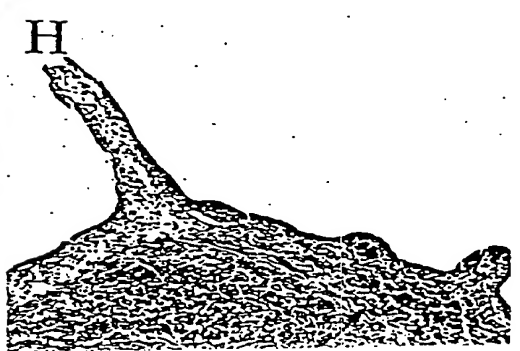
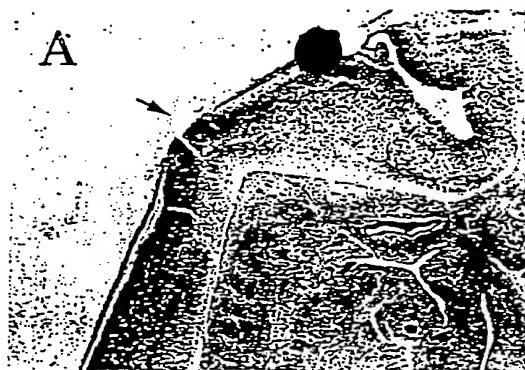


FIGURE 6

10050559974860

FIG. 7

Sequence clone *Bpx* promoter murin SpeI-SalI fragment

ACTAGTCATATAGCTGGCTCTTTTACAAAAGGCTTCAACACCCCTCCCC  
 CACACTTTAGTCATCCGTCATCTCTTCCTCATCAGGAAATATTATGAGAA  
 TTTTCCCATTTAAAATCACACAGGTTGTGAAAATTACAGAAACCAGGGTA  
 CAGAATATTTAAACCACTGTCAGTTACATCATCCAAAGGCCACCTATGCT  
 TATTTTGGTAATTTTAAACCTCAAAGGATCTCTTGTGGGCTCCTCCACT  
 ACCCTCCTCTCTTTCCAGAGCCTCAGGTTATAACCAAAGGGATAGACTA  
 AAGACAATCCAGTACCTTGCCCATTTTTTTCATTCCCTGTCACTGTTTCCA  
 TATAGCTCTTTTGAAATTATGAACATATAGTATCAGTTGAAAACGGAATG  
 AATGATACTGCATTTCTGCAAAATCCACAGGCTATAGGGTGGAAGATG  
 AGCCATAGGTGGAGGAATCAGCCATATTAGAGAATCTGGGAAGGCAAG  
 AGGTGTTGAAATTTGATTCATCTACTAATTTACTGGCTCAGGATTTGTC  
 AATCACTGCAGCCTGGCAAATGAGATTAGAGAAGAGTCTGGGAGGGA  
 AGGGTGACGCAGCAACCTGCATACACTTAAAAAAGAGCTGAGAG  
 ACAACTGCGTAATCATACTGCGGCACCAAGTTCCTCCATCCCTCCGCCCC  
 GAGTGGCTGGAGCAGCTGCTTGCGGAGGTCTGCCACTGCGGCTCTCTG  
 CAGTCTCTAGCCTGTTCCCTTCAGGGCCTAGAGTCTCCGCCAGACGCCG  
 GTTTCAATTCTGCTATCCAGCTTCAGCACCGTCTTTTATACTGCTTGCTG  
 CCTGCCATCAGTGCAGCCGCCGCCGCTCTTGGTTCACTCTGCCAGATC  
 ATCGGCATCTGCTGTATTGGTGAGTCTTCCTGCGGAGGTGAGGTCTCCT  
 GATCTGCGGGCTTAGCCACCATAAGTGCAGGCGATCGTTTGAAAACAAT  
 GGCTGAATCAGTCGACCTCGAGGGGGGGCGTACCTTGCCCATTTTTTTCA  
 TCCTTGTCACTGTTTCCATATAGCTCTTTTGAAATTATGAACATATAGTA  
 TCAGTTGAAAACGGAATGAATGATACTGCATTTCTGCAAAATTCACAG  
 GCTATAGGGTGGAAGATGAGCCATAGGTGGAGGAATCAGCCATATTAGA  
 GAATCTGGGAAGGCAAGAGGTGTTGAAATTTTGATTCATCTACTAATTTA  
 CTGGCTCAGGATTTGTCAATCACTGCAGCCTGGCAAATGAGATTAGAGA  
 AGAGTCTGGGAGGGAAGGGGTGACGCAGCAACCTGCATACACTTAAA  
 AAAAAAGAGCTGAGAGACAACTGCGTAATCATACTGCGGCACCAAGTCC  
 TCCATCCCTCCGCCCCGAGTGGCTGGAGCAGCTGCTTGCGGAGGTCTG  
 CCCACTGCGGCTCTCTGCAGTCTCTAGCCTGTTCTTCAGGGCCTAGAGT  
 CTCCGCCCAGACAGCCGGTTTCAATTCTGCTATCCAGCTTCAGCACCGT  
 CTTTTATCCCACTGCTTGCTGCCTGCCATCAGTGCAGCCGCCGCCGCT  
 CTGGGTCATCTCTGCCAGATCATCGGCATCTGCTGTATTGGTGAGTCT  
 TCCTGCGGAGGTGAGGTCTCCTGATCTGCGGGCTTAGCCACCATAAGTG  
 CAGGCGATCGTTTGAAAACAATGGCTGAATCAGTCGAC

[SEQ ID NO:1]

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FIG. 8

Sequence Bpx murin cDNA identical to genomic DNA

GTACCTTGCCCATTTTTTTCATTCTTGTCAGTGTTCATATAGCTCTTT  
GAAATTATGAACATATAGTATCAGTTGAAAACGGAATGAATGATACTGC  
ATTTCTGCAAAATCCACAGGCTATAGGGTGGAAGATGAGCCATAGGTG  
GAGGAATCAGCCATATTAGAGAATCTGGGAAGGCAAGAGGTGTTGAAAT  
TTTGATTCTACTACTAATTTACTGGCTCAGGATTTGTCAATCACTGCAGC  
CTGGCAAATGAGATTAGAGAAGAGTCCTGGGAGGGAAGGGGTGACGCA  
GCAACCTGCATACACTTAAAAAAGAGCTGAGAGACAAGTGCCTAAT  
CATACTGCGGCACCAGTTCCTCCATCCCTCCGCCCCGAGTGGCTGGAG  
CAGCTGCTTGCGGAGGTCTGCCCAGTGCAGGCTCTCTGCAGTCTCTAGCCT  
GTTCTTCAGGGCCTAGAGTCTCCGCCAGACAGCCGTTTCAATTCTGC  
TATCCCAGCTTCAGCACCGTCTTTTATCCCCACTGCTTGCTGCCTGCCATC  
AGTGCAGCCGCCGCCGCTCTTGTTTCATCTCTGCCAGATCATCGCGCAT  
CTGCTGTATTGGTGAGTCTTCTGCGGAGGTGAGGTCTCTGATCTGCGG  
GCTTAGCCACCATAAGTGCAGGCGATCGTTTGAAAACAATGGCTGAATC  
AGTCGACCATAAAGAAGTGTCTGAATCCAACCAAGAAGAGCTTGGCAGC  
CAGGTAATGGCGGAGGGGGCCGGGAAAGTCAGGACCGCAGTGAAGGT  
GTCTCCATTGAGCCTGGAGATGGCGGGCAACATGGTGAAGAAACCGTGG  
CTGCTGGAGTAGGGGAAGAGGGAAAAGGTGAAGAAGCTGCTGCAGGGT  
CTGGGGAAGATGCTGGGAAGTGCGGAGGCACTGATGAGGACTCAGACT  
CAGACCGTCCAAAAGGACTTATCGGTTATCTTTAGATACCGATTTCTGT  
GAAAGTCTCCAGTGAAAGTTAAGTGCCGAGTGCTAGCTCTTAAAAAGC  
TTCAAACAAGAGCTGCCCATTTGGAATCCAAATTCCTGAGGGAATTTTCA  
GACATTGAAAGGAAGTTTGCTGAAATGTACCAACCCCTACTAGAAAAA  
GACGACAGATCATCAATGCAGTCTATGAGCCACAGAAGAGGAATGTGA  
GTATAAATCGGACTGTGAGGACTATTTGAGGAGGAGATGGATGAGGAG  
GAAGAGACTAACGGCAACGAAGACGGTATGGTGCATGAATACGTGGAT  
GAAGATGATGGTTATGAGGACTGTTATTATGATTATGATGACGAGGAAG  
AAGAGGAGGAGGAAGATGACAGCGCTGGGGCCACCGGAGGAGAAGAG  
GTTAACGAAGAGGATCCTAAGGGGATTCCGGATTTTGGTTGACTGTTT  
AAAAAATGTTGAAGCACTCACTCTATGATTAAGAAATATGATGAGCCT  
ATTCTGAAGCTGCTGACAGATATTAAGTGAAGCTTTCGGATCCCGGG  
AGCCTCTCAGCTTCACACTCGAATTTCACTTCAAGCCCAATGAATATTT  
AAAAATGAGCTGTTGACAAAGACTTATGTGCTGAAGTCAAAGCTTGCAT  
GCTACGATCCCCACCTTATAGGGGAAGTCCATTGAGTACGCCACTGG  
CTGCGACATAGATTGGAACGAAGGAAGAATGTCACCTTTGAGAACCATC  
AAGAAGAAGCAGAGACATCGCGTCTGGGGAAGTGTCCGAAGTGTGACTG  
AAGATTTTCCCAAGGACTCTTCTTCAATTTCTTCTCTCTCATGGGATCA  
GCTTAAATGGAGGGGATGAAAATGATGATTTTTTACTTGGTCATAATCTG

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FIG. 8 cont.

CGTACTTACATAATTCCAAGATCAGTGTTATTTTTCTCAGGAGATGCACT  
TGAATCTCAGCAGGAGGGTGTAGTTAGGGAAGTTAATGACGAAATATAT  
GACAAAATTATTTATGATGATTGGATGGCTGCAATTGAAGAGGTTAAAG  
CCTGTTGCAAAAATCTTGAGGCATTAGTAGAAGATATTGATCGTTAAAC  
AGAGTAGATGCTTTTGAACTAACTGCTCTACATGCAGTTACTGAAGACA  
TAAGCAGTTAATATTGCTTGTTCTGTCATTTTTCTGTCATGCCAGTT  
TAAAAATTCAAATACTAATTAATCTGACCTTGCATTGTAGTGGTATGATG  
TTTTCAAGACATGTAGACTGTGATAAATGATTAAGACATTAATAGTCTGT  
AGTATAACCCTTCTGAAGTCCTTGTGCCATGTATCTATTAATCTGTGGCT  
GTGAATATTATTAGAAGTGCTAAATGAGATTATTTGTTTGCAAAGAAAAT  
ATTGGAAACCTACCTAAGAGTGCTTTGCTATTTCCCCCTTATCCTCTTAG  
TGCTTTGGCCAATTGACTTTATTGTGCCTGCTTCATTTTGCAAGTAAATATG  
CAGTAGAATTTAACTTGAATGCCTAAGAGGCCTGCATATGATTGAGA  
ATTTCAAGGCAAAATCATATTTATTATTGATAACAGCTAGTGCAAGGCTTC  
TGATTGTATGTGACTGTGATAAATAATAAACTCAATTGTATTGAAGTTA  
CTGTTTATCATTGACATGTGAGTTACAGTATTTCAAATGTTGCAAAATATT  
GTCCGTGTGAATTGTGTAACTGTGATTACAGTGTACATTTTTTTCATAAT  
ATACTGAATCATTGAAATGGACACTTTACCATTTCTGAAAATACAT  
TTCATATTCTGTTTCACTGAAAAATAAAATGAATAAAAAATTT

[SEQ ID NO:2]

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FIG. 9

BPX human cDNA identical to genomic DNA

TGTTAGAGAGCCTGGGAAGGTGAGcAGAGcTGAAAACCTGATAGATCTA  
ATAATTTACTGGCTCTGGGTTTGTCTAGTCACTACATTGCAGCAAATGAGA  
TTAGAGCATAGTTGTGGGAGGGAAGGAGGTGACGCAGCAATCTATTTGC  
ACCTAGAAAATTTTAGGCAAGTGATAGCTGCGTAATCATACTGCGGCACC  
GTTTTTTTCTTGCAGCAGTAGCTGCTTGCGGAGGAGGTCTGCCCCACTGCA  
GCTCTCTGCAGTCTCCGGCTCTCTCTGTCAGGATCGGTCAACGCAGCCGT  
CGCCGCCCTCTGCACCCAGCCCAGGTGCCCCACTGCTTCAGTCCGGTTCTC  
AAAGCCTCAGCACCATCTTTTATCCCCGAGCAGCCTGGATCGTCGTTCCC  
TCAGTCCGGACGCCACTGCTAGGTCCGACCACCGCCGCTTCTGATATTTC  
GGTGAGTCTTTTCTGTGGAGGTTTGGTCTCCCGATCTCTGTGGTAGCCA  
CCTTAGGCGTGTACGGTCCTTTGAAAAATGGCCGAGTCAGAGAACC GCA  
AGGAGCTGTCAGAATCCAGTCAAGAAGAGGCTGGTAATCAGATAATGGT  
GGAAGGGCTCGGGGAACATCTGGAGCGCGGTGAAGATGCCGCTGCTGG  
GCTTGGAGACGATGGGAAGTGCAGTGAAGAAGCTGCCGCTGGGCTTGG  
GGAAGAAGGGGAAAACGGTGAAGATACTGCTGCTGGGTCCGGGGAAGA  
TGGGAAAAAAGGTGGCGATACTGATGAGGACTCAGAGGCAGACCGTCC  
AAAAGGACTTATC  
GGTTATGTTTTAGATACAGACTTTGTTGAAAGTCTACCTGTGAAAGTTAA  
GTACCGTGTGTTAGCCCTTAAAAAGCTTCAAACCTAGAGCGGCCAATTTA  
GAATCCAAATTCCTGAGGGAATTCATGACATTGAAAGAAAGTTTGCTG  
AAATGTACCAACCCTTACTGGAAAAAAGACGTCAGATCATCAATGCAAT  
CTATGAACCTACAGAAGAGGAATGTGAATATAAATCAGACTCTGAGGAC  
TGTGATGATGAGGAAATGTGTCATGAAGAGATGTATGGTAATGAGGAGG  
GTATGGTACATGAATATGTGGATGAGGACGATGGTTATGAGGACTATTA  
TTATGATTATGCTGTGGAAGAGGAGGAGGAGGAGGAGGAGGAGGACGA  
CATTGAGGCTACTGGAGAAGAGAATAAAGAAGAGGAGGATCCTAAGGG  
AATTCCTGATTTTTGGCTAACTGTTTTAAAAAACGTTGATACACTCACTC  
CTTTGATTAAAGAAATATGATGAGCCTATTCTGAAGCTCCTGACAGATATT  
AAAGTTAAGCTTTCAGATCC

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FIG. 9 cont.

TGGCGAGCCCCTCAGTTTCACACTAGAATTTCACTTCAAACCCAATGAAT  
ATTTCAAAAATGaGTTGTTGACAAAGACCTATGTGCTGAAAGTCAAAGCTA  
GCATATTATGATCCCCATCCCTATAGGGGAACCTGCGATTGAGTATCCAC  
AGGCTGTGAGATAGATTGGAATGAAGGAAAGAATGTCACTTTGAAAACC  
ATCAAGAAGAAACAGAAACATCGGATCTGGGGAACAATCCGAACGTAA  
CTGAAGATTTTCCCAAGGATTCATTTTTCAATTTTTCTCTCCTCATGGAA  
TCACCTCAAATGGAAGGGATGGAAATGATGATTTTTTACTTGGTCACAAT  
TTACGTACTTACATAATTCCAAGATCAGTATTATTTTTCTCAGGTGATGCA  
CTGGAATCTCAGCAGGAGGGGGTAGTTAGAGAAGTTAATGATGCAATTT  
ATGACAAAATTATTTATGATAATTGGATGGCTGCAATTGAGGAAGTTAAA  
GCTTGTGCAAAAACCTTGAGGCATTAGTAGAAGACATTGATCGTTAGA  
GCAGAGTATACATGGCCCTGAAATTAACCTgCCCTAGATATAGTTACTCAA  
GGTATAAGAAgCCTTGTGTTCTGTATTTTgCTTTGTAGTGTAGTTAAAC  
ATATGTTTTCAAAAATATAAGAAAAGTTCAAAAACATAATTAATTTGACCTT  
GAGTTTTAGTAGTAGAATGTTTTCAAGAAATGTACACTGTGGTAAATGAT  
TTAAACACTAGTATAGTGTGTGTAGCTTAATCCTTCTGAAGTCTTTTTG  
TCATGTAGCTATTAATCTGTGGCTATGAAATGATCAGAAATGCTAAGTGA  
GATCAATATTTGTTTGGAAAAAAATCTTGGGAAACAACCCAAGGGTTTT  
CGCTGTTGTTGTTTTCTTTTTCTATTTTTGTTTACTTAGTCCTTTAGCTAG  
TGGATTTAATTTGTTGTGCCTGCTTCATTTTGAATAACAATGCAGTAG  
AATTTAAAACCTTGATGCTTAAGAGGCCTGCATATAGATAAGAATTCAG  
GCAAAACTACATTTATTGTTAATAACAGCTTGTTCATAGGCCTTGTATT  
TATGTAACGTGATAAATAATGAAAACCTAGTTATATTGAGGTTATTGTT  
TGTCGGTGAAGTGTAGTCACAGTATTTTCAAAAGTTTGCACATATTGTT  
CTGTGTAATTGTGTAAGCCATAATTACAGTGTTAATTCTCTTTTCTATT  
ACATCATTCAATTGAAAGTGATCACTTACCATTTTGAAAAGATATTTCGT  
GTTCTTTCCTGCAAAAATAAAAAGAATAAAAATTTAGAGTGTCTCATGG  
AATTCC

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**FIG. 10**

human *BPX* 5' region

ACTTAAAGGAAAAATTTATCTATAAACTGACAGAATTTAGAAATAAATA  
CAACAATATGTAAACAGTTTTAATATCTGTGATAGTAACAAATCTTTAA  
ATCTGGAAAAATAATAGTCACTTAAAATTTTAAAAAATTGTTCAATTAATA  
AATGATCCAAGTTAGAAATATGAACAAAATAAACCTCACCAATAATTAC  
TATAGAGAGGAAAATTTAATTACTGCAAAGCTTTCCATCCTATAAATACA  
TTATCAAATAGTTTAAACCATTTCTTTAATGCTGAGATTAGATTATTTCCA  
ATTAACCTCAAAGCATCAAGCAAATGTTATGATTTCTAAGAATAAACATA  
ACTTTCCATTTTGGCTTTTGTATATATGTATATTTCTAACGGCTGTTAAAG  
CCAGCATTAAAGAAGGAGAAGCAGAAAGTCAGTATTGGGACTGGGGTTAT  
TTATAAGCCAGGCAACTGGTTAATTGTGGTTAATTGTCTGGTATGTTTAC  
TAGTCACGTAGTTGTATACACCATACTAGTTTTTCATCACAGGCCCTCAT  
TCGCCCCCACTGCCATCGGACTTCCTCCTCCTCCCCCTCACAGGAAATGTT  
TCGAGAATTTTTCAACCTAAAATCATATAGCTTGTGAAAAATACCGACAA  
ACATAATATAGAATATTTAAATAACTGACACGCCACCTAAAGACCATCA  
GTGCTAATTCCTGGTGTTTTAAATCTTTGAAGCGTTTGTATTATCAGCTCTT  
CCACCATCCACCTCTCCCCCTCCCCAGGTCCCCGATCTAAAAATCAAAGAG  
ATTGATTTAGGATGGGTGGGTGCCTTGTCTTCTCTCATTGTTTCGACATTTT  
AGTTACGTTTTCTCTGAGCTCTCTGAAAAGCATAAAAAGTATAATATCTGT  
TAAAAGTTGGATGAATGAACATAATGAACGCAATGGGATTCCAGAAAACCT  
CTGCGGGAGATGGGCTAGAGGACGAGGAGGAGGTGGATGAATCAGCCA  
TGTTAGAGAGCCTGGGAAGGTGAGCAGAGTTGAAAACCTTGATAG  
ATCTAATAATTTACTGGCTCTGGGTTTGTGAGTCACTACATTGCAGCAAA  
TGAGATTAGAGCATAGTTGTGGGAGGGAAGGAGGTGACGCAGCAATCTA  
TTTGCACCTAGAAATTTTAGGCAAGTGATAGCTGCGTAATCATACTGCGG  
CACCGTTTTTTTCTTGACAGCAGTAGCTGCTTGCAGGAGGAGGTCTGCCAC  
TGCAGCTCTCTGCAGTCTCCGGCTCTCTCCTGCAGGATCGGTCAACGCAG  
CCGTCGCCGCCCTCTGCACCCAGCCAGGTGCCACTGCTTCAGTCCCGT  
TCTCAAAGCCTCAGCACCATCTTTTATCCCCGAGCAGCCTGGATCGTCGT  
TCCCTCAGTCCGGACGCCACTGCTAGGTCCGACCACCGCCGCTTCTGATA  
TTTCGGTGAGTCTTTTCTGTGGAGGTTTGGTCTCCCGATCTCTGTGGTA  
GCCACCTTAGGCGTGTACGGTCCTTTGAAAA

[SEQ ID NO:4]

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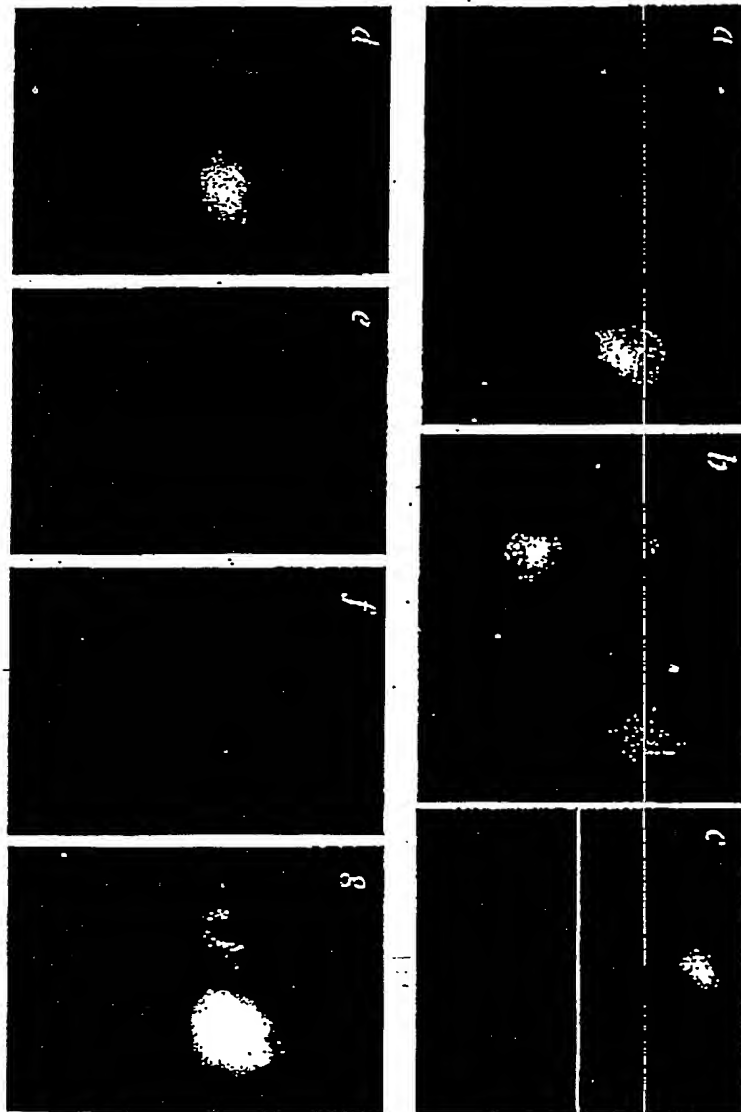


FIGURE 11

# Genomic structure of the NAP1L2 gene

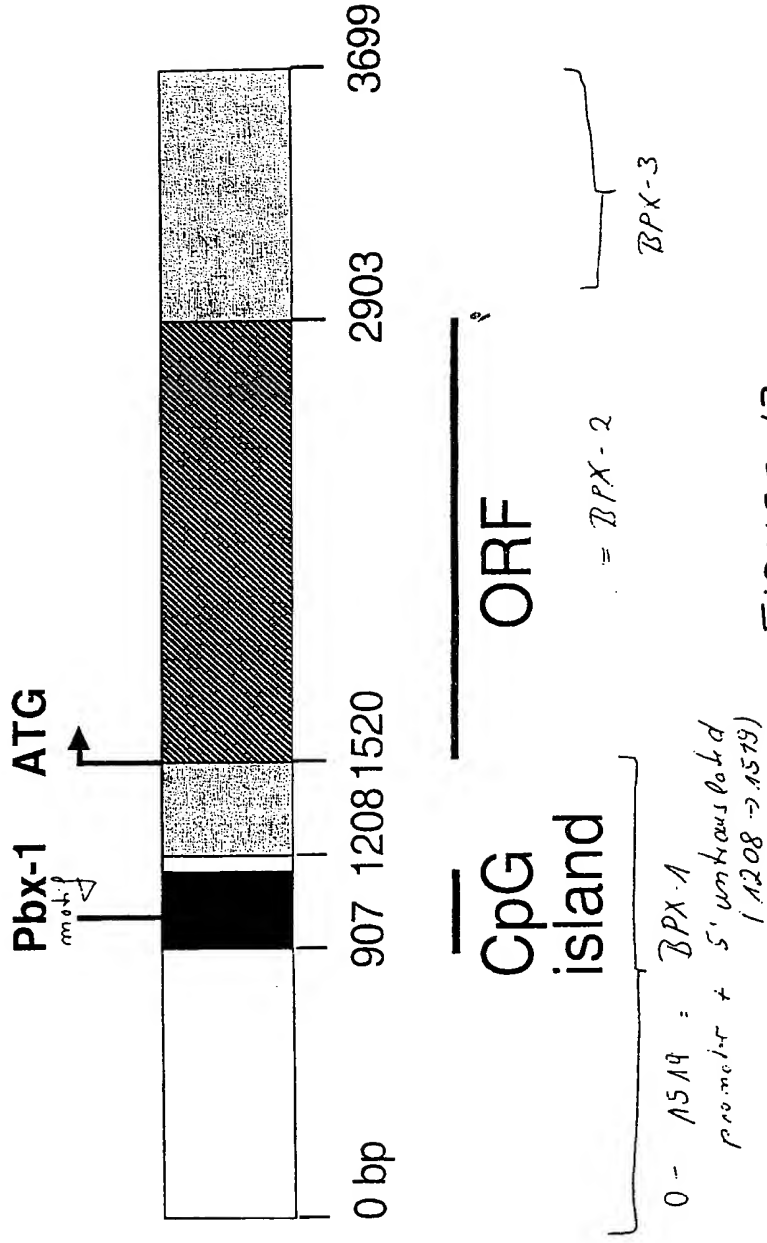


FIGURE 12